New Data Centers Study Findings Have Been Reported by Researchers at University of Michigan [Agent coordination Via contextu

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2025 MAY 20 (VerticalNews) -- By a News Reporter-Staff News Editor at Information Technology Newsweekly -- Investigators discuss new findings in Information Technology - Data Centers. According to news reporting originating in Ann Arbor, Michigan, by VerticalNews editors, the research stated, "A network of spatially distributed data centers can provide operational flexibility to power systems by shifting computing tasks among electrically remote locations. However, harnessing this flexibility in real-time through the standard optimization techniques is challenged by the need for sensitive operational datasets and substantial computational resources."

Financial support for this research came from Marie Sklodowska-Curie Actions COFUND Postdoctoral Program, through project Learning ORDER.

The news reporters obtained a quote from the research from the University of Michigan, "To alleviate the data and computational requirements, this paper introduces a coordination mechanism based on contextual regression. This mechanism, abbreviated as AgentCONCUR, associates cost-optimal task shifts with public and trusted contextual data (e.g., real-time prices) and uses regression on this data as a coordination policy. Notably, regression-based coordination does not learn the optimal coordination actions directly from a labeled dataset. Instead, it exploits the optimization structure of the coordination problem to ensure feasible and cost-effective actions."

According to the news reporters, the research concluded: "A NYISO-based study reveals large coordination gains and the optimal features for the successful regression-based coordination."

This research has been peer-reviewed.

For more information on this research see: Agent <underline>co</underline>ordinatio<underline>n</underline> Via <underline>c</underline>ontext<underline>u</underline>al <underline>r</underline>egression (Agentconcur) for Data Center Flexibility. Ieee Transactions On Power Systems, 2025;40(2):1832-1842. Ieee Transactions On Power Systems can be contacted at: Ieee-inst Electrical Electronics Engineers Inc, 445 Hoes Lane, Piscataway, NJ 08855-4141, USA. (Institute of Electrical and Electronics Engineers - www.ieee.org/; Ieee Transactions On Power Systems - ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=59)

Our news correspondents report that additional information may be obtained by contacting Vladimir Dvorkin, University of Michigan, Dept. of Electrical Engineering and Computer Sciences, Ann Arbor, MI 48109, United States.

Keywords for this news article include: Ann Arbor, Michigan, United States, North and Central America, Data Centers, Information Technology, University of Michigan.

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